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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,449	04/23/2001	Jonathan M. Owen	ALPH:0006/FLE TT4413	3176

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EXAMINER

DANG, KHANH

ART UNIT PAPER NUMBER

2111

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/840,449

Applicant(s)

OWEN ET AL.

Examiner

Khanh Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/25/2005 response.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 44-99 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 44-50, 52, 53, 58-71, 75-82, 85-96 and 99 is/are rejected.
- 7) ☒ Claim(s) 51, 54-57, 72-74, 83, 84, 97 and 98 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20050425.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The restriction requirement is hereby withdrawn because, as argued by the Applicants, claims 2-43 have been already cancelled in the Request for Filing a Continuation Application filed 4/23/2001.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 44-50, 52, 53, 58-71, 75-82, 85-96, and 99 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagersten et al. (Hagersten, 5,897,657).

With regard to claim 44, Hagersten discloses a method of maintaining order of transactions in a distributed communication system (shown generally at Fig. 1), the distributed communication system (shown generally at Fig. 1) comprising a plurality of nodes (SMP nodes 12 a-d) interconnected by a plurality of communication links (network 14, see at least Fig. 1 and description thereof), the plurality of nodes having access to a plurality of addressable memory locations, the plurality of nodes (SMP

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nodes 12 a-d) comprising a source node (the requesting node in Hagersten) and a target node (the home node in Hagersten), the method comprising the acts of dispatching, by the source node (the requesting node in Hagersten), a first request (request 110, for example) directed to a first memory address (every node 12 a-d comprises L2 cache and memory, and both having a memory address, see at least column 6, lines 21-41) accessible by the target node (note that the home node, which receives the request, is clearly readable as a target node. Further, the home node itself may contain requested data, and the home node does not have to send any request to other nodes. Instead, the home node replies directly to the source node or requesting node, see at least column 5, line 64 to column 6, line 5. Still further, in Hagersten, a memory operation is an operation causing transfer of data from a source to a destination, and may include one or more coherency operation upon network 14); transmitting, from the target node (the home node), a first response (a reply) directed to the source node (the requesting node) in response to the first request (the request from the requesting node); transmitting, from the source node (the requesting node), a second response (a completion) directed to the target node (the home node) after receipt of the first response (a reply); and stalling service, by the target node (the home node), of a second request directed to the first memory address pending receipt of the second response (in Hagersten, subsequent requests are not performed until after the home node receives the a coherency completion from the requesting node, see at least column 14, line 54 to column 15, line 9).

With regard to claim 45, it is clear that the first request from the requesting node is associated with a first transaction (accessing the memory), and the act of transmitting the first response (reply) is performed after the first transaction has reached a memory commit point or in another word, after the transaction has finishes accessing to the requested memory.

With regard to claim 46, it is clear that act of transmitting the second response (completion) is performed after the first transaction has reached a processor commit point, or in another word, the processor has finished the request transaction.

With regard to claim 47, it is clear that the first transaction can be either a read or write request/transaction, wherein the first response (reply) is a so-called "Target Done" response, and wherein the second response (completion) is readable as the so-called "Source Done" response.

With regard to claim 48, it is clear that first request from the requesting node comprises a read request, and wherein the first response (reply) comprises a read response.

With regard to claim 49, it is clear that the first request from the requesting node is associated with a first transaction (either read or write request/transaction), and the method comprises the act of: stalling, by the source node, dispatch of a second transaction pending receipt of the first response (it is clear that the requesting node will not issue a second request pending receipt of the first response).

With regard to claim 50, it is clear that in Hagersten, the home node issues a probe (demand) in response to the first request from the requesting node, the probe

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(demand) being directed to each of the plurality of nodes (12 a-d) to determine whether any of the plurality of nodes is caching data corresponding with the first memory address (see at least column 5, lines 39-44); and each of the plurality of nodes issues a third response (reply, shown in solid line) in response to the probe (demand), wherein the second response (completion) from the requesting node is performed after receipt of all of the third responses (replies, shown in solid line).

With regard to claim 52, it is clear that each of the third responses (replies, shown in solid line) is directed to the requesting node.

With regard to claim 53, it is clear that one of the third responses (replies, shown in solid line) is a read response, the read response indicating that the node which issued the read response is storing data corresponding to the first memory address (see at least column 5, lines 39-44).

With regard to claim 58, it is clear that the requesting node comprises a processor.

With regard to claim 59, it is clear that the system interface of the requesting node comprises a host bridge providing connection to the processor.

With regard to claim 60, it is clear that the memory controller is used for controlling access to the first memory address.

With regard to claims 61-71, 75-82, 85-96, and 99, see discussion above.


***Allowable Subject Matter***

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Claims 51, 54-57, 72-74, 83, 84, 97, and 98 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

U.S. Patent Nos. 6,631,448 to Weber and 5,961,621 to Wu are cited as relevant art.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 703-308-0211.

A handwritten signature in black ink, appearing to read "Khanh Dang", written in a cursive style.

Khanh Dang  
Primary Examiner